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elevation was the first of the Appalachian system, having been elevated during the Lower Silurian epoch.

Voted to adjourn this meeting to the second Tuesday in February.

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**Six hundred and twenty-ninth Meeting.**

February 14, 1871. — ADJOURNED STATED MEETING.

The Academy met at the house of Dr. H. W. Williams.

The PRESIDENT in the chair.

The following gentlemen were elected Fellows of the Academy: —

Charles Francis Adams, Jr., of Boston, to be a Resident Fellow in Class III., Section 3.

Professor C. C. Everett, of Cambridge, to be a Resident Fellow in Class III., Section 1.

William Everett, of Cambridge, to be a Resident Fellow in Class III., Section 2.

Henry W. Paine, of Cambridge, to be a Resident Fellow in Class III., Section 1.

John G. Whittier, of Amesbury, to be a Resident Fellow in Class III., Section 4.

Ferdinand Bôcher, of Cambridge, to be a Resident Fellow in Class III., Section 4.

George J. Brush, of New Haven, to be an Associate Fellow in Class II., Section 1.

Stephen T. Olney, of Providence, to be an Associate Fellow in Class II., Section 2.

Jeremiah Smith, of Dover, N. H., to be an Associate Fellow in Class III., Section 1.

In accordance with the recommendation of the Rumford Committee, it was voted: —

That the cost of printing the memoir of Professor Joseph Lovering, on the *Periodicity of the Aurora Borealis*, be assessed on the income of the Rumford Fund.

Also, that one hundred copies of the quarto edition of the

Life of Rumford be presented to Dr. George E. Ellis, together with a complete set of the Essays (as edited by the Committee), with the thanks of the Academy.

It was voted that the Finance Committee be requested to prepare a statement of the current expenses and receipts of the Academy.

It was voted that the meeting adjourn, at its close, to the second Tuesday in March.

Professor Pickering made a communication on a new form of solar eyepiece, by which the light may be reduced to any desired extent.

In the common diagonal eyepiece all the light is reflected into the eye by the inclined surface of the prism. A second prism is connected to the first by some substance whose index of refraction is very nearly equal to that of the glass. In consequence, an exceedingly small proportion of the light is reflected, the greater part passing directly through, out of the telescope. Again, since the angle of incidence equals 45°, the reflected ray is almost totally polarized, and its intensity may be varied at will by a Nicol's prism. Colored glasses are thus avoided, and with them the danger of heating and cracking the lenses of the eyepiece, as almost all the heat and light passes out of the tube. If desired, it may be received on a second eyepiece or spectroscope, so that during an eclipse or transit, for instance, two observers may use the same telescope. A curious coloration of the images is sometimes produced, probably due to the unequal dispersion of the glass and cement. Apart from its practical application, this device has a scientific interest as affording a means of producing a plane reflecting surface whose index of refraction is very nearly unity.

Professor J. D. Whitney read several affidavits of the discovery of pre-historic man in Colorado.

Professor N. S. Shaler made a communication on the formation of continents. He compared the circular development in the Moon with the linear development in the Earth and Mars.

Professor J. D. Whitney read letters from Baron Richtofen on the geology of China and Japan. He also exhibited a new method of illustrating books.

Remarks on this communication were made by the President, Mr. T. T. Bouvé, and Professor N. S. Shaler.

Dr. H. W. Williams showed a new test for astigmatism.

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**Six hundred and thirtieth Meeting.**

March 24, 1871. — ADJOURNED STATED MEETING.

The PRESIDENT in the chair.

The President presented the report of the Committee on Finance.

The Corresponding Secretary read letters from Messrs. Olney, Whittier, Brush, and Kaulbach, accepting membership of the Academy.

It was voted to appropriate the additional sum of $500, to be expended by the Committee of Publication.

It was voted that the annual assessment be raised from five dollars to eight dollars.

Professor B. Peirce made a communication on the recent eclipse, in which he called attention to the indebtedness of the English observers to the plans of the Americans, and their omission of a suitable acknowledgment. His own observations were conducted in Sicily, where he divided his party into five sections, of which two had clear weather. All the observations tended to show the solar nature of the corona.

Remarks on this communication were made by Professor E. C. Pickering.

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**Six hundred and thirty-first Meeting.**

April 11, 1871. — MONTHLY MEETING.

The PRESIDENT in the chair.

The Corresponding Secretary read a letter from Professor Ferdinand Bôcher acknowledging his election into the Academy.

Professor J. P. Cooke presented a report of the Rumford Committee on the cost of publication of the Life and Works of Count Rumford.